

Install or Repair a Crawl Space Vapor Retarder

Job Aid for Install or Repair Vapor Retarder in a Subspace Badge

Aligns With Standard Work Specifications 2.0202.1, 2.0202.2, 2.0202.3, (3.0104.1)



Exposed dirt floors in crawl spaces or basements allow ground vapor and soil gases to enter the space when vapor retarders are missing or not effective.



Spread out plastic as smoothly as possible.



Clear out stored items and debris as needed to allow complete coverage while installing or repairing an existing vapor retarder (plastic ground cover).



Ensure plastic extends a minimum of 6 inches up walls, piers, and columns and is securely attached.



Select a 6-mil minimum ground vapor retarder with a perm rating of 0.1 or less.



Overlap seams by at least 12 inches using a reverse shingle or upslope lapping technique.



Tape seams and secure plastic as needed using mechanical fasteners. Seal fasteners with appropriate material.



Seal the edge of the plastic to the foundation and around any supports with mastic or acoustical sealant.



A well-installed vapor retarder helps to minimize ground moisture vapor and soil gases, such as radon.



Checklist

Install or repair vapor retarder in a subspace

DESIRED OUTCOME

Durable, effective ground vapor retarder provides long-lasting access and minimizes ground moisture and other gas vapors beneath home.¹

Ш	Use appropriate material (minimum 6-mil thickness).
	Ensure coverage is 100% (or as close as is reasonably possible).
	Extend vapor retarder at least 6 inches up walls, columns, and footings.
	Use physical attachments where practical and necessary for long-term adhesion of vapor barrier to vertical surfaces.
	Overlap all seams at least 12 inches using a reverse or upslope lapping technique.
	For wall-to-floor connection, install the wall vapor retarder under the ground moisture barrier.
	Fasten material to ground as needed to prevent movement where ground is sloping, area is accessible, or area is subject to wind/air movement that may disturb the material.
	Seal seams and penetrations with a durable sealant compatible with the vapor retarder (UNVENTED CRAWL SPACES only).
	Ensure vapor retarder does not interfere with established drainage patterns.

1. Relevant Standards: 2.0202.1, 2.0202.2, 2.0202.3, 3.0104.1



For more information, visit: energy.gov/eere/wap

DOE/GO-102023-5934 • September 2023